VOLUME 6 SURVEILLANCE

CHAPTER 9 PART 145 INSPECTIONS

Section 5 In-Depth Team Inspection of a Part 145 Repair Station

6-1707   PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. **Maintenance:** 3603/3610/3614.

B. **Avionics:** 5603/5610/5614.

6-1708   OBJECTIVE. This section provides guidance and directions for completing an in-depth inspection of a Title 14 of the Code of Federal Regulations (14 CFR) part 145-certificated repair station.

6-1709   SCOPE.

A. **In-Depth Team Inspections.** The Federal Aviation Administration (FAA) developed the in-depth team inspection program as part of the comprehensive repair station oversight system. Individual principal inspectors (PI) or teams can perform in-depth inspections. The FAA recognizes that an in-depth team inspection is often more effective, mostly because of the complexity of the FAA surveillance system. Teams will conduct inspections based on either risk assessments identified in the Repair Station Assessment Tool (RSAT) – Volume 6, Chapter 9, Section 1 – or through routine surveillance, and will begin a risk management process (RMP) – Volume 6, Chapter 9, Section 2.

B. **Risk Management Tools.** The RSAT and the RMP are essential tools the FAA uses to identify and reduce risk. Risk management (RM) is essential in identifying and controlling hazards, and also in managing FAA resources per risk-based priorities. The FAA accomplishes this function through systematic risk assessments of a repair station's performance and environment. The FAA defines hazards in terms of their potential consequences. The likelihood and severity of a consequence determines risk. The RSAT assesses the combined effects of likelihood and severity of a risk, setting priorities if it identifies multiple risks. Subsequent RM action plans contain strategies to transfer, eliminate, accept, or reduce the risk. This process validates the intended results of an action plan, which should effectively eliminate or control the hazard. RSATs help the aviation safety inspector (ASI) focus on hazards and associated risks which have regulatory controls, such as compliance, enforcement actions, certificate amendments, and rulemaking. ASIs track hazards identified through an RSAT, or through routine surveillance, by using the RMP until the repair station satisfactorily resolves those hazards.

C. **Hazard From Longevity.** When a PI has a work assignment at the same repair station for more than 5 years, this is a risk that may trigger an in-depth team inspection. The potential risk justifies an in-depth team inspection to assess or identify any risks or hazards that could develop from longevity of certificate management.

D. Associated Risks – Air Transportation Oversight System (ATOS). A certificate-holding district office (CHDO) could schedule an in-depth team inspection based on risks associated with ATOS input. The CHDO would base its decision on data collected in design-based and performance-based assessments by air carrier inspectors evaluating repair stations in that certificate holder's listing for essential maintenance providers.

E. Versatility. ASIs have designed the in-depth team inspection to be versatile, and teams can use this inspection for regional requirements, continuation of a previous surveillance effort, allegations of improper maintenance, or component failure trends. Inspections based on these reasons should be just as comprehensive and in-depth as the "R" item inspections. The team inspection concept aids the CHDO in determining the compliance health of a repair station.

6-1710 PROCEDURES. The FAA may conduct in-depth team inspections in three distinctive steps:

A. CHDO Inspection Planning Process. See Figure 6-88, Certificate-Holding District Office Inspection Planning Process, the Web-based Part 145 Repair Station Inspection Checklist at http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs300/, and Figure 6-89, In-Depth Team Inspection Finding Worksheet.

B. CHDO Inspection Process. See Figure 6-90, Certificate-Holding District Office Inspection Process.

C. Reporting and Feedback Process. See Figure 6-91, Reporting and Feedback Process.

6-1711 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 CFR parts 43, 65, 120, 121, 125, 129, 135, 145, and 183;
- Operations Specifications (OpSpecs);
- Volume 2, Chapter 11, Section 1, Section 2, and Section 3, as required;
- Volume 6, Chapter 9;
- Advisory Circular (AC) 145-9, Guide for Developing and Evaluating Repair Station and Quality Control Manuals;
- AC 145-10, Repair Station Training Program; and
- Maintenance Annex Guidance (MAG), if the air agency also has a European Aviation Safety Agency (EASA) approval, or is in a European Union (EU) member state under the Bilateral Aviation Safety Agreement (BASA).

B. Forms. None.

C. Job Aids. Part 145 Repair Station Inspection Checklist at http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs300/.

6-1712   TASK OUTCOMES.

A. **Complete the PTRS Record.**

1) Entering inspection findings from team in-depth inspections into the PTRS gives headquarters (HQ) and regional personnel a way to ensure timely closeout action on each finding, and also details information which helps analysis of the results.

2) The team leader initiates a FAA Form 8000-36, Program Tracking and Reporting Subsystem Data Sheet, for the applicable PTRS activity code listed in paragraph 6-1707. Inspectors must reference in the report in Section IV, Comments, each finding of that record. The team leader will give the CHDO manager and PIs a preliminary copy of the in-depth inspection report within 3 business days from the out-briefing date, including a list of findings and a copy of the completed Part 145 Repair Station Inspection Checklist.

3) The CHDO manager, or the manager's designee, must ensure the certificate holder's PIs enter findings into PTRS within 3 business days of receipt of the inspection team's preliminary report. ASIs must use the RMP to resolve findings resulting in enforcement action, and must resolve findings assessed with a value of less than 3 in Section I, Assessment, using the RMP. Inspectors can find guidance on this tool in Volume 6, Chapter 9, Section 2.

4) The CHDO manager, or the manager's designee, must monitor all PTRS activities created as a result of this inspection. They must prioritize findings based on potential risk and address the findings in a timely manner. The CHDO manager must report findings remaining open after 90 days to the division manager for resolution.

5) Once the team leader confirms CHDO personnel have entered findings into PTRS, the team leader must close the applicable 36xx/56xx in-depth surveillance activity opened in Item 2.

NOTE: If the inspection team completes all the applicable RSAT generated activities as a result of the in-depth team inspection, the PI may close the required 3650/5650 "R" item for that facility in the current fiscal year (FY). The assigned repair station PI will record in the PTRS Section IV, Comments, that an in-depth team inspection fulfilled the 3650/5650 "R" item requirements by completion of PTRS activity code 3603/3610/3614 or 5603/5610/5614, as applicable. Document the PTRS record ID number used to complete that inspection for traceability.

B. **Complete the Task.** Completion of this task will result in:

- A satisfactory inspection with no deficiencies;
- Opening the appropriate Organizational Technical Administration PTRS record to track deficiency corrective actions;
- Sending a letter to the operator documenting all deficiencies and initiating an Enforcement Investigative Report (EIR); or
- An assessment rating of 1 or 2 on the PTRS record, followed by the ASI starting an RMP record.

C. Document the Task. Place all supporting documentation in the certificate holder's office file, including applicable completed sections of the Part 145 Repair Station Inspection Checklist. This checklist must remain in the certificate holder's office file until personnel repeat an inspection of the activity code. The repair station PI must update the enhanced Vital Information Database (eVID), as required.

6-1713   FUTURE ACTIVITIES. Validate all corrective actions at the next 3650/5650 base inspection.

6-1714   PROCESSES AND PROCEDURES.

Figure 6-88.   Certificate-Holding District Office Inspection Planning Process
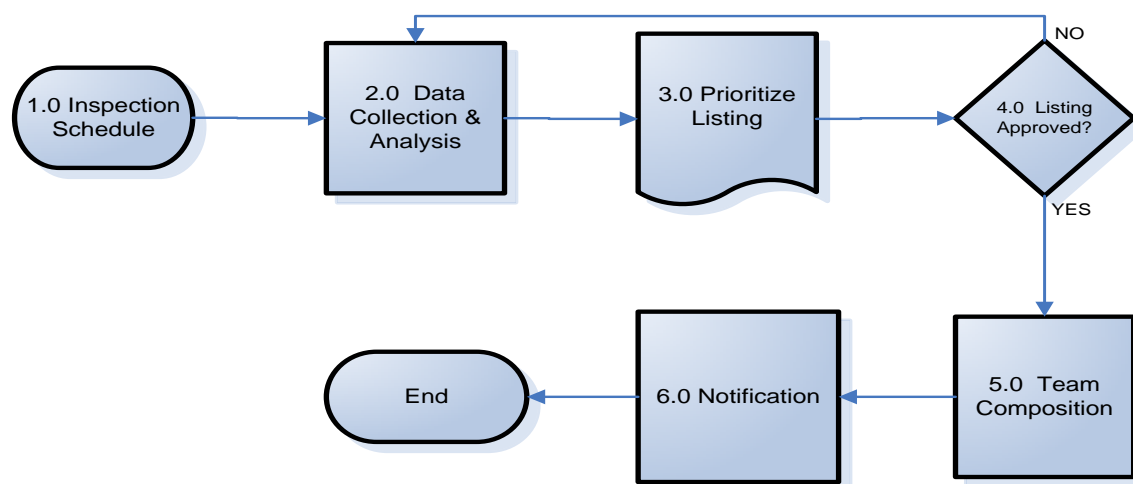
A. Step 1.0 – Inspection Schedule. The CHDO will develop an in-depth team inspection schedule for repair stations for the next FY using the methods outlined in subparagraphs 2.0, Data Collection and Analysis, and 3.0, Prioritize Listing.

B. Step 2.0 – Data Collection and Analysis.

1) Each PI will collect for consideration information on repair stations from the applicable databases, such as RSAT and RMP at https://apt.avs.faa.gov/, and Safety Performance Analysis System (SPAS) at http://home.spas.faa.gov/splash/splash.asp. For additional information on SPAS data, see Volume 6, Chapter 9, Section 1, paragraph 6-1630. Make a list of concerns and issues for each repair station.

2) Review, compare, and evaluate the collected information for trends, performance, and compliance issues of the repair stations.

C. Step 3.0 – Prioritize Listing. The CHDO Airworthiness Front Line Manager (AFLM) will determine the risk analysis method in prioritizing a repair station inspection list. A review of recent surveillance activity outcome, PTRS assessments with less than average ratings, the type of maintenance being performed at a repair station, and RMPs generated are all tools

that will assist the AFLM in prioritizing the list. The AFLM will forward the list to the CHDO manager for consideration and planning purposes. Repair stations identified by the criteria in subparagraph 2.0 are inspection candidates, and the CHDO manager, with input from the AFLM, will determine which listed repair stations will receive an in-depth team inspection.

D. Step 4.0 – Listing Approved? The AFLM, will ensure that the affected PIs are notified of the inspection schedule.

E. Step 5.0 – Team Composition. Team leaders will base the composition of the inspection team on the size and complexity of the repair station. The team comprises a team leader and a sufficient number of ASIs. If the repair station performs maintenance on a part 121 air carrier's aircraft, the team should invite the carrier's principal maintenance inspector (PMI) to participate in the inspection. Team leaders should not change team members unless absolutely necessary. Team leaders should contact the AFLM, who will make any team adjustments.

1) Team Leader. A team leader should have at least 2 (or more) years of experience as a repair station PI.

2) Team Experience – Repair Stations. All members of the team must be ASIs that have:

- Completed indoctrination,
- Completed Certification and Surveillance of Part 145 Repair Stations – FAA course number 21058, and
- At least 1 year experience as either a repair station PI or assistant PI.

NOTE: The team may include, for training, one ASI that does not meet experience requirements.

NOTE: Team leaders should not include on the team PIs or inspectors assigned to a facility undergoing inspection because such a situation is not desirable or advisable. However, repair station PIs can serve the team to advantage as advisors, using knowledge and expertise of the repair station.

F. Step 6.0 – Notification. The team leader will notify the repair station of the team-focused inspection and its date. The repair station representative and the team leader will decide on a date for the inspection, and the team leader will notify the AFLM of the date.

1) Team Member Responsibilities. As their team duties dictate, team members should be familiar with:

- Applicable part 145 air agency OpSpecs, ratings, process specifications, and associated capability list (CL);
- The Repair Station Manual (RSM) or Quality Control Manual (QCM), the EASA supplement if the repair station holds an EASA approval, and the associated training program;
- Applicable references, forms, and job aids, as listed in paragraph 6-1711;

- The SPAS repair station analytical model (RSAM) for past findings and flags to include violations and complaints; and
- Completed PTRS records.

2) Team Event Organization and Coordination.

- The team leader and team members will evaluate all necessary data, including SPAS and PTRS records, prior to the team event.
- The team leader should identify specific duties during the assessment/inspection.
- The team may need to coordinate with other offices, such as Aircraft Evaluation Groups (AEG), Aircraft Certification Offices (ACO), certificate management offices (CMO), certificate management units (CMU), CHDOs, and International Field Offices (IFO), for clarification of procedures and processes.
- If necessary, the same team inspecting the main base will conduct inspections at work away from the main base and at additional fixed locations. The CHDO manager must coordinate these additional inspections.

NOTE: The team must use the Part 145 Repair Station Inspection Checklist at http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs300/.

NOTE: If the air agency also holds an EASA approval, the inspection team should use the MAG, Section B, Appendix 3, EASA Form 9, FAA Recommendation, with the Part 145 Repair Station Inspection Checklist at http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs300/.

NOTE: The repair station PI or the PI's representative will attend all team meetings and be an integral part of the team's functions and discussions. The PI or the PI's representative should provide support, information, and counsel to the team and assist the team leader.

Figure 6-89.   In-Depth Team Inspection Finding Worksheet

NAME_____Designator_____

WORKSHEET INSTRUCTIONS:

1. Enter each finding from the Part 145 Repair Station Inspection Checklist.

2. If applicable, reference each finding to the Air Carrier(s) Manual Procedure(s) to which it pertains.

3. Return completed worksheets to the team leader daily.

FINDING INFORMATION:

Team Member making the findings:

Name:_____

Repair Station: _____

Inspection Checklist Item No.: (e.g., PTRS 3601 Question 1)_____

Manual Reference(s):
_____
_____

Finding: (use back if additional space is needed), attach documented evidence.
_____
_____
_____
_____
_____

Responsibilities:

Inspectors should complete worksheets for any findings. Worksheets will be in both electronic and manual versions (preferred method, electronic).

Team leader will collect worksheets daily.

Team leader will complete the final report.

Figure 6-90.   Certificate-Holding District Office Inspection Process
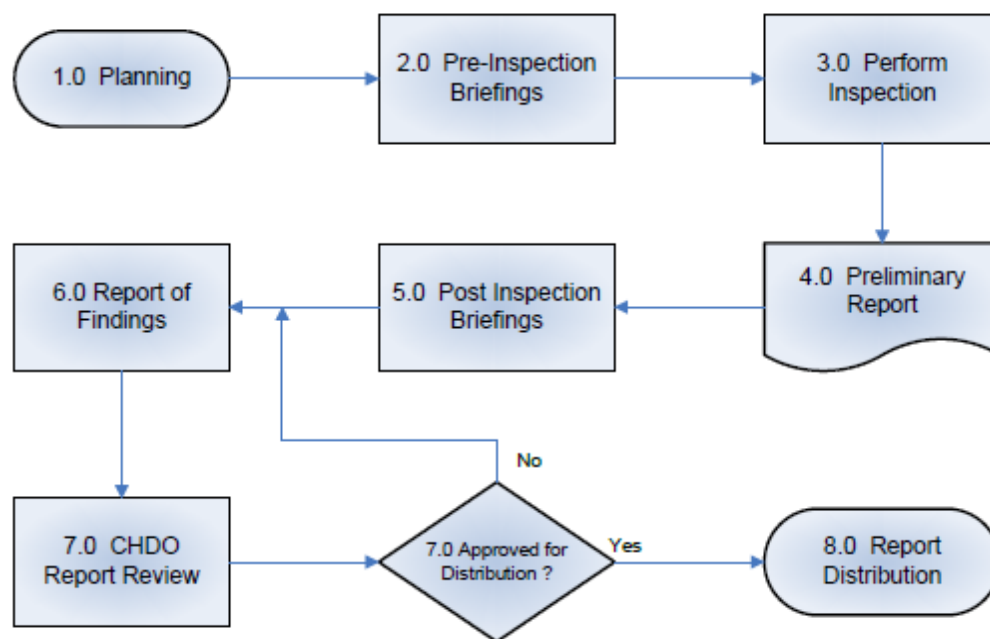
    A. Step 1.0 – Planning. The CHDO manager will communicate inspection criteria to the team leader. The team leader will then take the following actions:

        1) Prepare for the team briefing;

        2) Prepare for the repair station in-brief;

        3) Determine administrative logistics such as lodging and transportation;

        4) Determine team member work assignments;

        5) Prior to inspection, contact the PI to ascertain any additional areas of concern with the repair station; and

        NOTE: The team leader and team members should familiarize themselves with this handbook section.

    B. Step 2.0 – Pre-Inspection Briefings. The pre-inspection briefing consists of two distinct processes: a team briefing and a repair station in-brief.

        1) Team Briefing. The team leader must conduct a briefing for team members. The briefing will include:

        a) Establishing the team leader as the point of contact (POC);

b) Confirming team member duties and responsibilities, both those general for all inspections and those specific to this inspection;

c) Ensuring that all team members have appropriate sections of this order and the repair station documentation;

d) Discussing critical logistical issues;

e) Scheduling future meetings;

f) Making sure team members are aware of restrictions regarding:

- Conduct and ethical considerations;
- Fair presentation of results and transmittal forms;
- Due professional care in handling proprietary information;
- Storage and protection of materials;
- Confidentiality; and
- Conflict of interest.

g) When team members have differences of professional opinion, they will present the issues to the team leader;

h) Once team members have presented and discussed their positions, the team leader has the responsibility and the authority to make a final decision and communicate this decision to all concerned; and

i) Team members must accept the decision of the team leader and complete the remainder of the audit in a professional manner.

2) Repair Station In-Brief. The team leader must provide an in-brief to repair station management before each inspection. The inspection team will hold this meeting at the repair station, and document the meeting in the report. The team leader is responsible for leading the opening meeting. During the opening meeting, the team leader will:

a) Introduce team members to the repair station representatives and POCs.

b) Discuss the roles and responsibilities of team members.

c) Confirm the inspection objectives, scope, and criteria.

d) Explain that the inspection scope may be expanded, if necessary.

e) Discuss the inspection methods and techniques that will be used.

f) Review inspection documentation, such as checklists, job aids, and transmittal forms.

g) Confirm inspection timetables and other arrangements previously made with the repair station, such as times and dates of briefings and exit meeting.

h) Verify current revision status of documentation previously received.

i) Outline the overall inspection process.

j) Confirm any administrative requirements.

k) Inquire about onsite safety, emergency, and security procedures.

l) Obtain additional specific identification, when required.

m) Request feedback from the repair station.

n) Resolve outstanding issues.

C. Step 3.0 – Perform Inspection. Team members will conduct the inspection per the applicable chapters/sections in (1) FAA Order 8900.1, (2) Part 145 Repair Station Inspection Checklist(s), (3) Data Collection Tools (DCTs), and (4) instructions provided by the team leader.

- For all findings, the team leader will ensure that the inspection team collects objective items of proof. The team will provide these items to the CHDO in a useable form.
- If a significant violation is uncovered during the inspection, the team leader should contact the CHDO for guidance as soon as possible.

D. Step 4.0 – Preliminary Report. Team members, before leaving the inspection site, will provide the team leader with sufficient data and information to assist the team leader in preparing a preliminary report. The team leader will use this information for the out-briefing.

E. Step 5.0 – Post-Inspection Briefings. The team leader will conduct an out-briefing with the repair station's management team. If possible, team members should attend the meeting to assist the team leader in communicating findings. During this meeting, the team leader should:

- Thank the repair station management for their hospitality and help.
- Confirm the purpose and scope of the inspection.
- Identify documents the team reviewed and used during the audit, including the revision level or date of revision.
- Give positive observations.
- Provide a preliminary copy of all discrepancies or observations the team found during the inspection. Make sure the repair station management has a complete understanding of the observations and findings, including expected future actions. If no discrepancies were noted, this must also be conveyed to the repair station management during this briefing.
- Discuss the process for administering findings.
- Ask whether any points need to be clarified.

- Brief the CHDO manager and repair station PIs on the inspection results and discuss any deficiencies.
- Brief the regional coordinator if required.

NOTE: The PI will provide a formal letter to the repair station outlining the results of the inspection. This will include all areas inspected and a listing of any discrepancies/observations. If no discrepancies were found, this must also be conveyed in this letter. The PI should provide the letter within 10 days of the post-inspection briefing. The responsible CHDO will communicate any remaining action items to the certificate holder.

F.   Step 6.0 – Report of Findings. The product of the inspection is the written report containing the team's findings. It is an official record of the inspection proceedings, and systematically documents possible problem areas discovered during the inspection. The content of the report should be factual, objective, clear, and concise. It should answer basic "who, what, when, where, and how" questions, and should document inspection results. Team members, before leaving the inspection site, will provide the team leader with sufficient data and information to finish the report. This report should include the following:

1)   Executive Summary. This section contains a standard lead-in paragraph, a description of the certificate holder, an overview of the inspection, and acknowledgments.

2)   Description. This describes the type of operation the certificate holder is engaged in. The description should be prepared in enough detail so that the reader can clearly understand the certificate holder's operation.

3)   Overview of Inspection Areas. This section summarizes inspection activity, and gives historical documentation of areas the team inspected and how the team inspected those areas. This section, for example, should state which programs the team evaluated and what methods were used, such as a random sampling method.

G.   Step 7.0 – CHDO Report Review. The team leader should document all findings in the report, including those corrected on the spot.

NOTE: The team leader will formulate and standardize a report as determined by the CHDO, or use the example provided. See Step 6.0, Report of Findings. Team members will contribute to the written report (1) by documenting findings in their assigned areas and (2) by providing any items of proof as needed. The team leader will provide a copy of the preliminary inspection report to the CHDO manager or their designee within 3 business days from the date of the out-briefing.

H.   Step 7.0 – Approved for Distribution? The AFLM management will review the preliminary inspection report for acceptability. If the CHDO management finds the report acceptable, inspectors should proceed to Step 8.0, Report Distribution. If the CHDO management determines that the report is unacceptable, inspectors should return to Step 6.0, Report of Findings.

I.   **Step 8.0 – Report Distribution.** The CHDO AFLM will distribute the preliminary inspection report to the PMI or principal avionics inspector (PAI) of the certificate holder.

Figure 6-91.   Reporting and Feedback Process
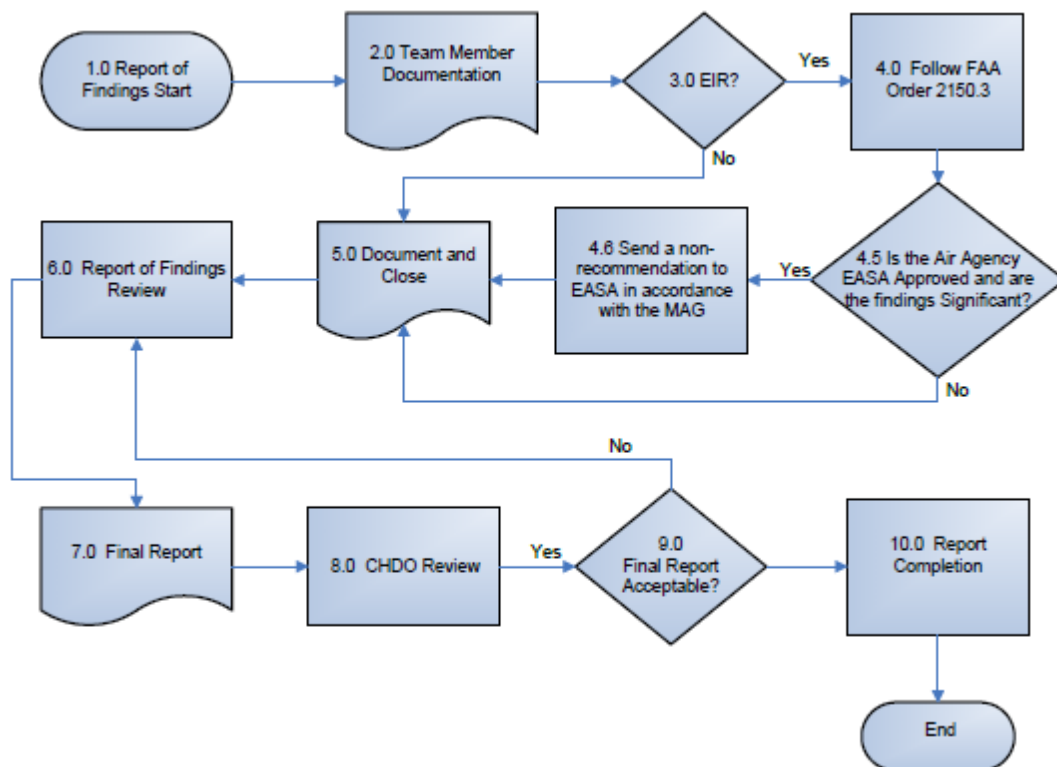
A.   **Step 1.0 – Report of Findings Start.** This step begins when the PMI or PAI receives the preliminary inspection report of the in-depth inspection. This phase of the inspection process uses a closed-loop system of findings resolution. This process uses the Enhanced Flight Standards Automation System (eFSAS) PTRS database system for tracking and closure of inspection findings.

B.   **Step 2.0 – Team Member Documentation.** Team members will document findings by specific PTRS activity code numbers. Team members can use the Part 145 Repair Station Inspection Checklist to assist them in determining the appropriate activity code. The CHDO PI will create a PTRS record identification in 3 business days from receipt of the preliminary inspection report for each finding, and give the team leader record ID numbers associated with each finding. The team leader will record this number and associated finding in the comments section of the in-depth inspection record, opened in subparagraph 6-1712A2). Once the PI has assigned a PTRS record ID to all findings, the team leader may close the applicable 36XX/56XX record, stating "any findings listed in this record ID will be addressed by the CHDO under the applicable PTRS record ID listed for that finding."

NOTE: If there is a current open RMP-generated activity code for the repair station, team members may use this record ID to record additional inspection or enforcement actions.

C. Step 3.0 – Enforcement Investigative Report (EIR)?

1) If a finding is a possible enforcement action, proceed to Step 4.0, Follow FAA Order 2150.3, FAA Compliance and Enforcement Program.

2) If a finding is a certificate management issue, proceed to Step 5.0, Document and Close.

D. Step 4.0 – Follow FAA Order 2150.3. When a finding does not meet the 14 CFR requirements, the PMI will follow the enforcement guidance process.

NOTE: If the inspection team finds items that may trigger an enforcement action, the team should turn over all applicable information to the PMI for processing per the current edition of FAA Order 2150.3.

E. Step 4.5 – Is the Air Agency EASA Approved and are the Findings Significant? If the air agency has an EASA approval, and if the inspection finding is significant per the MAG Section B, Part II, paragraph 6, proceed to Step 4.6, Send a Non-Recommendation to EASA in Accordance with the MAG. If the finding is not significant, proceed to Step 5.0, Document and Close.

F. Step 4.6 – Send a Non-Recommendation to EASA in Accordance with the MAG. If the findings result in enforcement action or are significant findings per EASA Special Conditions, complete an EASA Form 9 non-recommendation per the MAG, Section B, Part II, subparagraph 4.4.

G. Step 5.0 – Document and Close. PIs will monitor records until corrective action is complete, at which time the team leader may close the PTRS record.

H. Step 6.0 – Report of Findings Review. The CHDO manager will monitor findings to ensure closure. Division managers must resolve findings remaining open more than 90 days.

I. Step 7.0 – Final Report. The PMI/PAI will complete a final report. The report becomes final when repair station personnel correct all findings and the PMI/PAI closes all the open findings generated as a result of the inspection in PTRS.

J. Step 8.0 – CHDO Review. The CHDO manager, or the manager's designee, will review the final report for acceptability.

K. Step 9.0 – Final Report Acceptable? If the report is acceptable, continue to Step 10.0, Report Completion. If the report is not acceptable, return to Step 7.0, Final Report.

L. Step 10.0 – Report Completion. Once the report is finalized, the CHDO manager or the CHDO manager's designee will sign it. A copy will be filed in the air agency file at the CHDO.

6-1715   SAMPLE FINAL REPORT. This section contains a format for an in-depth team inspection report (see Figure 6-92). The report should contain the following:

A. Title Page. This page lists the facility undergoing inspection.

B. Table of Contents.

C. Executive Summary. This item is a brief overview of the general inspection, summarizing inspection results, identifying number of findings, and possible enforcement actions. This will list the names and numbers of team members for possible future contact.

D. Findings (Two Parts). These should clearly describe the findings, and also indicate answers to "who, what, where, when, and how" questions. Findings should include references to 14 CFR.

E. Part 1 – Repair Station Findings. Listing of closure actions taken, including the applicable PTRS record ID number used to track the actions taken to obtain compliance.

F. Part 2 – Attachments. Attach any required documents for inclusion in the report. Once team members have documented findings, the team does not need to retain finding sheets.

G. Part 145 Repair Station Inspection Checklist. Attach copies of completed checklists per the applicable activity code.

Figure 6-92.   Sample Final Report

Sample Title Page:

<div align="center">

DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

[NAME] CERTIFICATE-HOLDING DISTRICT OFFICE

</div>

<div align="center">

IN-DEPTH TEAM INSPECTION REPORT

</div>

<div align="center">

Repair Station/Maintenance Provider [Name]

Certificate Number

City, State

</div>

<div align="center">

Dates

</div>

RESERVED. Paragraphs 6-1716 through 6-1728.